#### FORM PTO-1449

		Sheet <u>1</u> of <u>1</u>
FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE	ATTY. DOCKET NO.	SERIAL NO
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#### U.S. PATENT DOCUMENTS

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#### FOREIGN PATENT DOCUMENTS

Exmr Initial	Document Number	Date	Country	Class	Sub Class	lation   NO
5%	DE 196 29 583	01/29/98	Germany			
37	EP 0 828 143	03/11/98	EPO			

#### OTHER DOCUMENTS

#### (Including Author, Title, Date, Pertinent Pages, Etc.)

	1)	-QWu et al., "Design and Characterization of Traveling-Wave-Electrooptic-Terahertz-Sensors,"
		-IEEE Journal of Selected Topies in Quantum Electronics, Vol. 2, No. 3, pp. 693-700 (Scpt. 1996).
10	2)	M. Tani et al., "Photoconductive Terahertz Transceivers," Electronics Letters, Vol. 36, No. 9,
2		pp. 804-805 (April 27, 2000).
1.0	3)	Q. Chen et al., "Electro-Optic Terahertz Transceiver," Electronics Letters, Vol. 36, No. 15,
5		pp. 1298-1299 (July 20, 2000).
10	4)	Q. Chen et al., "Electro-Optic Transceivers for Terahertz-Wave Applications," J. Opt. Soc. Am. B.,
SI		Vol. 18, No. 6, pp. 823-831 (June 2001).
12	5)	International Search Report dated September 6, 2001.
2		

Examiner	56	Le	Date Considered	3/10	/63	
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## U.S. PATENT DOCUMENTS

FILING DATE April 5, 2001

**APPLICANT** 

Zhang, et al.

Exmr Initial	Document Number	Date	Name	Class	Sub Class	Filing Date
52	3.824,717	07/1974	Evtuhov et al.	307	88.3	
52	5,144,630	09/1992	Lin	372	22	
拉	4,510,402	04/1985	Summers et al.	307	427	
32	4,755,820	07/1988	Backhouse et al.	343	700 MS	
32	4,757,268	07/1988	Abrams et al.	330	4.3	
ie	4,759,820	07/1988	Calvert et al.	156	600	
2	4,922,091	05/1990	Grischkowsky	250	211 J	
7	5,332,918	07/1994	Smith et al.	257	431	
<del>- 32  </del>	5,355,247	10/1994	Byer et al.	359	330	
<u> </u>	5,377,043	12/1994	Pelouch et al.	359	326	
	5,493,719	02/1996	Smith et al.	455	325	
52		08/1996	Carrig et al.	359	326	
	5,543,960	09/1997	Brown et al.	324	96	
se	5,663,639	03/1997	Brener et al.	250	338.1	<b>——</b>
5l 5l	5,729,017			250	338.1	
5(	5,789,750	08/1998	Nuss	257	431	
52	5,844,288	12/1998	Mourou et al.	250	330	
31	5,894,125	04/1999	Brener et al.			<u> </u>
Sl	5,937,118	08/1999	Komori	385	27	
52	5,946,085	08/1999	Kawashima et al.	356	28	1
IL.	6,014,249	01/2000	Fermann et al.	359	341	<u> </u>
5%	6,038,060	03/2000	Crowley	359	328	<u> </u>

## FOREIGN PATENT DOCUMENTS

Exmr Initial	Document Number	Date	Country	Class	Sub Class	Translation YES   NO

#### OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	1)	Q. Chen, P. Y. Han, Z. Jiang, XC. Zhang, "Recent Development of Free-Space TH <sub>z</sub> Imaging," Invited
1 58	•,	Paper, The 7th International Conference on Terahertz Electronics, Nara, Japan, November 1999 (4 pages)
61	2)	Q. Wu et al., "Free-space Electro-Optic Sampling of Terahertz Beams," Appl. Phys. Lett. 67, 3523 (1995)
51	3)	Q. Wu et al., "Ultrafast Electro-Optic Field Sensors," Appl. Phys. Lett. 68, 1604 (1996)
12	4)	Q. Wu et al., "Broadband Detection Capability of ZnTe Electro-Optic Field Detectors," Appl. Phys Lett 68,
50		2924 (1996)

Examiner	51	Par	Date Considered 3/1./.3
	16	rer	

Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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(Rev. 2-32)

PATENT AND TRADEMARK

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Information Disclosure Statement by Applicant

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#### U.S. PATENT DOCUMENTS

Exmr Initial	Document Number	Date	Name	Class	Sub Class	Filing Date
Si	6,078,047	06/2000	Mittleman et al.	250	338.1	
3%	6,111,416	08/2000	Zhang et al.	324	753	
12	6,144,679	11/2000	Herman et al.	372	21	

#### FOREIGN PATENT DOCUMENTS

Exmr Initial	Document Number	Date	Country	Class	Sub Class	Translation YES   NO	

# OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	5)	Q Wu et al, "Dynamic Range of an Electro-Optic Field Sensor and Its Imaging Applications, Appl. Pys. Lett
51		68, 3224 (1996)
51	6)	Q. Wu et al., Two-Dimensional Electro-Optic Imaging of TH <sub>z</sub> Beams," Appl. Phys. Lett. 69, 1026 (1996)
32	7)	Q. Wu et. al, "7 Terahertz Broadband GaP Electro-Optic Sensor," Appl. Phys. Lett. 70, 1784 (1997)
El	8).	P.Uhd Jepsen et al, "Detection of H <sub>z</sub> Pulses by Phase Retardation in Lithium Tantalate," <i>Phys. Rev. E</i> , 53,3052 (1996)
Sil	9)	Nahata et al., "Coherent Detection of Freely Propagating Terahertz Radiation by Electro-Optic Sampling," <i>Appl. Phys. Lett.</i> <b>68</b> , 150 (1996)
5%	10)	Nahata et al., "Reshaping of Freely Propagating Terahertz Pulses by Diffraction, Appl. Phys. Lett. IEEE-JSTQE, \$7,701 (1996) Vol. 2, No. 3
3	11)	XC. Zhang and Q. Wu. "New Terahertz Beams Imaging Device," Optics & Photonics News, 12, 9 (1996)
	12)	XC. Zhang, Q. Wu, and T. D. Hewitt, "Electro-Optic Imaging of Terahertz Beams," Ultrafast
58		Phenomena X, Springer Series in Chemical Physics, <b>54</b> (1996)
58	13)	Z. G. Lu, P. Campbell, and XC. Zhang, "Free Space Electro-Optic Sampling With a High-Repetition-Rate Regenerative Amplified Laser," <i>Appl. Phys. Lett.</i> , <b>71</b> , 593 (1997)
50	14)	Zhiping Jiang, F. G. Sun, Q. Chen, and XC. Zhang, "Electro-Optic Sampling Near Zero Optical Transmission Point," Appl. Phys. Lett., 74, 1191 (1999)
58	15)	Y. Cai et al., "Coherent Terahertz Radiation Detection: Direct Comparison Between Free-Space Electro-Optic Sampling and Antenna Detection," Appl. Phys. Lett., 73, 444 (1998)
El	16)	Q. Wu and XC. Zhang, "Design and Characterization of Traveling Wave Electro-Optic Terahertz Sensors," IEEE J. Sel. Top. Quantum Electron, 2, 693 (1996)

Examiner	56	Ler	Date Considered	3/4/03	
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Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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#### U.S. PATENT DOCUMENTS

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#### FOREIGN PATENT DOCUMENTS

Exmr Initial	Document Number	Date	Country	Class	Sub Class	Translation YES   NO

# OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

- 0	17)	C. Winnewisser et al., "Electro-Optic Detection of THz Radiation in LiTaO <sub>3</sub> , LiNbO <sub>3</sub> and ZnTe,"
51		Appl. Phys. Lett., 70, 3069 (1997)
	18)	A. Nahata, A. Weling, and T. Heinz, "A Wideband Coherent Terahertz Spectroscopy System Using
42		Optical Rectification and Electro-Optic Sampling," Appl. Phys. Lett., 69, 2321 (1996)
52	19)	Mourou et al., "Picosecond Microwave Pulse Generation," Appl. Phys. Lett., 38, 470 (1981)
58	20)	D. H. Auston et al., "Picosecond Photoconducting Hertzian Dipoles," Appl. Phys. Lett., 45, 284 (1984)
	21)	A. P. DeFonzo, M. Jarwala, and C. R. Lutz, "Transient Response of Planar Integrated Optoelectronic
58		Antennas." Appl. Phys. Lett., 50, 1155 (1987)
38	22)	Ch. Fattinger and D. Grischkowsky, "Point Source Terahertz Optics," Appl. Phys. Lett., 53, 1480 (1988)
(1)	23)	P. R. Smith, D. H. Auston, and M. C. Nuss, "Subpicosecond Photoconducting Dipole Antennas,"
5%		IEEE J. Quantum Electron, 24, 255 (1988)
	.24)	D. Grischkowsky-et-al., "Far-Infrared Time-Domain Spectroseopy-With Terahertz Beams of Dielectrics
		and-Semiconductors;" J. Opt. Soc. Am. B., 7, 2006-(1990)-
58	25)	B. B. Hu and M. C. Nuss, "Imaging With Terahertz Waves," Opt. Lett., 20, 1716 (1995)
3	26)	R. A. Cheville, D. Grischkowsky, "Time Domain Terahertz Impulse Ranging Studies," Appl. Phys. Lett.,
58		67, 1960 (1995)
52	27)	D. M. Mittleman et al., "T-Ray Tomography," Opt. Lett., 22, 904 (1997)
38	28)	D. Mittleman et al., "T-Ray Imaging," IEEE J. Sel. Top. Quantum Electron, 2, 679 (1996)
70	29)	A. Nahata et al., "High-speed Electrical Sampling Using Optical Second-Harmonic Generation,"
1 2/		Appl. Phys. Lett. 69, 746 (1996)

Examiner Date Considered 3/10/63	
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Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.